



OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/990,613

DATE: 02/21/2002

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

4 <110> APPLICANT: Wu, Reen
 5 Chen, Yin
 7 <120> TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR THE
 8 ANALYSIS OF MUCIN GENE EXPRESSION AND IDENTIFICATION OF
 9 DRUGS HAVING THE ABILITY TO INHIBIT MUCIN GENE EXPRESSION
 12 <130> FILE REFERENCE: UC072.001A
 14 <140> CURRENT APPLICATION NUMBER: US 09/990,613
 15 <141> CURRENT FILING DATE: 2001-11-21
 17 <160> NUMBER OF SEQ ID NOS: 34
 19 <170> SOFTWARE: FastSEQ for Windows Version 4.0

Does Not Contain
 Correc. and Amend.

ERRORED SEQUENCES

157 <210> SEQ ID NO: 6
 158 <211> LENGTH: 22773
 159 <212> TYPE: DNA
 160 <213> ORGANISM: Homo sapiens
 162 <400> SEQUENCE: 6

163 ggtacccctg gttgtgacctg tgcgtcagtg ggccagggtc taagggctgt gaagactcaa 60
 164 catgccccca cctgctaactt ctgaacacca ggcactggct ctgagacccc cgggccttgc 120
 165 tggacatctc cccagggtgta ctgggccagg ggacaggggc ctggccatcc caacacccag 180
 166 gagcaagcag cccgtcacct gccaggtcc cggaggcccg gaacaccttc ctgctggggc 240
 167 caccagccc tggacctgtc ccgcttggtc acacgatggg accctcggcc catcagcagg 300
 168 tgagccccca ggagcgtgcg tctggcctgg taaggcctcc accccaggag ttggggggcc 360
 169 cccgtgccag ggagcaggag gctgcccagg tggagggtcc cacacagcta ccaactcccta 420
 170 tccccagcac agcctggggc ctggtcttga gtacacatcc tggggcctgg ctctgagcag 480
 171 accaagagcc catccctgct ttgtgacccc ctgggctgtg cctgacaccc cagggtgtcca 540
 172 gcgtggagct ggggcccagc tcagtgcctg ggagctgatg gaccctgggg cccggctcag 600
 173 tgcttggttg ctgatggaca ctggggcctg gctcaaacct gcaccgctgt ggtcggggga 660
 174 ggggagggtc gagccacgtg gggaacccag cccagtgac gactctttgc ggtggccaag 720
 175 cctccaggt gtccccccag gctgaggggc tgggcttggg gcagctggtg acagcagatg 780
 176 gtggccctga tcaactggtg ctggacggcc tctgaagggg tctgtggggt cctggacggg 840
 177 tccccattca tggcaggatt aacccccctc gggttctgtg tgggccaggc cggccctttg 900
 178 tctccactgc cccctggcca gaatgaggga cagtgaccca cccagggtct ggccctggtc 960
 179 agactccgtc agagccgcag ggcaagttcc tggcagctcc gaggtgggag gctcctctgc 1020
 180 gctccaggag gctgtgacct gcccccttc cgggcaggaa ccggtgtgt ccttttctt 1080
 181 cctttatctt ctgttttccag cgccttcaac tgtgaagagg tgaactcttc aaacacgtg 1140
 182 agcaaacagc cccgactccc agggccgcac ccgggatgtc tcaatagctg tggccttgac 1200
 183 gtccacctcg gacccctgcc ccggacccag cccagttccc aatgggcccct ctgcccgggg 1260
 184 aggtgcctag tgggagggac gagggcaaaag tcggggcccc cacttgtttg gtgtcactgt 1320
 185 gtgccagcgg ccaactggcg gcgaggctgt tccagggtgg aggcggggag ggttggaaca 1380
 186 caggcactga gcggggacag aggagctgcc tgagggtccc agctctgcca tggagaaaac 1440

RAW SEQUENCE LISTING

DATE: 02/21/2002

PATENT APPLICATION: US/09/990,613

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

187 gctatctcgc tgatgcagag gtgcccggcc cactcgagct gggggtgagg gggctgctcc 1500
188 ccagtgggcc gccagccccc atgaaggccg cgggcaccgg ccgtggtcag ggagggcagg 1560
189 ggacaggcag tgggggccag caggggagac actaggcttg gcccagcac ccaggtgggc 1620
190 atcggttgt gagctggagc cgcgggcagg gaggggggat gtcacgagg cttggctaag 1680
191 gtgggagacc tgggcgggtg cgtcgggggg acgtctgcag cagaggcctg ggcagcaggc 1740
192 acacccctcc tgcagtgcg aggaacgagg cggcacagcg gccggtagcc cccatttgc 1800
193 ccagcctggc ctggagcagg caggaaggcc ggggagaggg gtctggctgg ggctgggtg 1860
194 cagtcacagc cacgagccca ggggtgggga ctctggccca cccttcagac catgctcaag 1920
195 gccactggc ccaggcatgc ccgccacccc ttccaccgtg ccgtgctgca gcgggtctac 1980
196 cggcctggat gtgaaagaga gcttggagac ccagagacc tcggaacctt cagctttgga 2040
197 agtgacgtcg gtgggtggg tgggggggag acaggctctg ggtcccga agtgagcggg 2100
198 gagctacgt gagatctggg agacccctg ccccccacca ggtacagggc caggcagaag 2160
199 cccgaggtgt gccctgagtt aaagaaaccg tcacaaagaa caaagggaga aggcgggttc 2220
200 cagcctgcac cacagccctc gcgctctgag gagccacctg ggggcttcag ccatgagggg 2280
201 tgacaggtgg caaaacgggc cagctccgtt cacgtogetg tgcagctgtc tccggccctc 2340
202 catctccaga acgttctcac attcccaagc tgaaacctg tccccatgca acaccagctc 2400
203 accatccct ctgccagccc ctggcgccca ccgtccacac tccgtctctg cgggtttcat 2460
204 gactccagg gcagcacacg agtggccct cctgcctttg tctctgtgt ccacctgcct 2520
205 cactctgcac agtgtcccca gcttccccc tgggacagcc tgggcccagc cctccttttc 2580
206 acggctgaac cgtattccac cgcaaggatc agcctcagca tgctgacca gtctccgcc 2640
207 caggacaca tgggcagctt ctgccctttg tcagtgtatg tgctgtggac atgggtgtgc 2700
208 aaatgtccct caggaccgc cttcagttct tctggggaca gaccagagt ggagtgtctg 2760
209 gtcaccccca ccagcagggc acagggtcc ggggtccccc gtctctgcca acacttccta 2820
210 ctctctgtgt ttcttgatcc ccgccatcct attgagcgtg agacaggtea gaagctttga 2880
211 agatgggett tcgtctgtc ccagaaatcc cactctaaag aatttaactt cagaaagaca 2940
212 aacgcggggg agctggtgca gggcccgta cggggactgt gacgtaaata aaacaacaga 3000
213 cctggacacc accctagggg ccccatgggg ccggacgagg ccacaccacc cgacctggtg 3060
214 ctctctgctt ggcgtctgcg ccacggagca ttcaggagcg tggtgaccag ggagccagga 3120
215 ggtgggagca tctgaggtgc aggtcacacg ggcaggaggt gtttgcaaga ggtattgcag 3180
216 cgcggacgga gtgtcctgca gatgacgtg tctgtcctgt agatgacgt cgtcaaggag 3240
217 gtttaccaca tagccccgg gaagcccacc caacaccagc cggaggtgct aggttctgc 3300
218 ggtcccccac tggggcaggg ggaggacccc gggcagggtc aggaccccc ggagcagctg 3360
219 ctctctcaac cctgccaggg ttaatgagga ggcccagag tgaggtggag gccaaatggg 3420
220 actcagggcc ggagcctctg gcctggctgg atcagggtg gcattggaca agcgcagctg 3480
221 actcccgat tgcatggcca ggagacaact tgggcctcag tttcccttg aatgtgaacc 3540
222 ttgaaacaga tcagcccaga gacctccac ggtcttcaag gggctctggt cagctgggct 3600
223 ggggtctctg gaaatagagc ctctccagg gacccccaca agccaccag actgagcatc 3660
224 ctggccatgt gcatgcctga gctcagcagg agcctgccgg gctccccgtg ggctaagcag 3720
225 tgggtggagg ggagctccag cctcgtgggc cctgccggg cctcggggac ccatggtcag 3780
226 tggctggggg tgctgcccag aggtgggat tcccttccag caggagccgc agtggggctg 3840
227 agtgtgaggc aggtggtgt accactgtt ccatggacce tgcgtccaag gccagccctg 3900
228 ccttccagcg gctttgccat ctaggacggg tgccagggtg ggtaggccct tctctccctt 3960
229 ccgatttctc gaagctgctg ggggtggggg cgtcctgggc ctccaggcac agagctgcaa 4020
230 atccttctct atccaggcct ctccctgccc acagcccctc cccgagagca aacacacgtg 4080
231 gctggagcgg ggaagagcac ggtgccttgc gtggcctggc ctggcttggg gccaaaggctc 4140
232 cctgtacatc aagctggggc cccaggggga gcaagcacc gcccggctc cctccctgcc 4200
233 cgtccccgtc cccccaccg tgocagccc caggatgggt gccccgagc cgtgccggac 4260
234 gctggtgttg gctctggcgg ccatgctcgt ggtgcgcag gcaggtaaaga gccccccact 4320
235 ccgccccctc tcgatgctgt ctacagggc ggggtctctg caggctcgtt gcctgggagc 4380

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/990,613

DATE: 02/21/2002

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

236 ttctcctgca gagtgcacgg gcagatcccc ctacgaactcc ctgagtgtcc tggatgggac 4440
237 cctacccgtc cccaacacag ggctctgggg cccacagggc tcacagtgtc aggaaactca 4500
238 ggggctggct tggatggggg gtccaggaga aggtggggccc ctgaccgcag ggcaaggccc 4560
239 ctgggagacc accgaaaggg tcttgggtctt gggggtggga caggagtggg caatggggga 4620
240 gggggtcaca gctgggggtc tctctggagc cccatgaggc ccaggcatca gagtgcagcag 4680
241 gggcaggctt agcgtggacc cctgtccagg accggtctta ccttcacga cctccctggg 4740
242 gatecacagt ggcagggcag gtgagggtac ccgggacctt caagggttgc acagccagcc 4800
243 gcaagagccc cgccctcaac ccacgctcga ctcccacggc ccctctgtgg gcctctcatg 4860
244 ccgcacgggc tgccctggctc tcagccgagc gttttccctc gtctgtgtgc tcttggccag 4920
245 agccgcagca ttaatactta ctgtcaatag agaaagatgc agccccaggg gccaccggga 4980
246 gacacccagc caggctggcc atgaggctgc tgcagccctt ccctgccccg cctccgccc 5040
247 cctcccaagg ttggggtctg ggctgggcag gtgaggttcc ctggggtctc tctccatctg 5100
248 tggaaggagg gctgggtggg cagcagggtt ggaggcaggg ggcttcccc agtggctccc 5160
249 agcctgggcc cggggggagc tgcgtctggc tgcaagggtt gggggtctgt ttgaccagaa 5220
250 tagccacctc cttgcctctg attcttccgg gccatgcagc cttggctccc ctccactgag 5280
251 caggcagggc ctagggaact tcagcccacc cgtcctcctg tctccacgc acgtccaagt 5340
252 tggggagatc aagcccttgg cagggaactgt gctttagtca ccagatgcac gtctgtggc 5400
253 cggggaaggc agccctgcac agagcagctt catgttaggg gacacacccc aaagtgtagg 5460
254 ggtggtggtt ggtgggcaact tctctggcta caagatggag gcccagggtg tccagcccaa 5520
255 ggagggcact gcacggagca gataaccaag ggcagtcagc ctgggcaggg gaggggctgc 5580
256 ctggggggga ggggttgctt ggggtgggga ggggtgtctt ggggcagggg aggagctgcc 5640
257 tggggcgggg gagggtctgt agggccaggg aggggtctgc tggggtctgg gagggtctgc 5700
258 tggggtgggg aggggtctgc tgcggcgggg gccggggcgt gggagtggct ggttgggtctg 5760
259 gcacacaggg gcagggtctg gagctgtggg tcggggtgga ggactcagg atcggctggc 5820
260 tttctgggaa aggcagtcaa cctggatctc tggaggcggc ccctgtggtg gttcccagat 5880
261 gtcagcagga cctggctgga aaagccaggc agggccaggc cagagtgcga accacagggc 5940
262 cgccccctcg ctgagccctg accatgcttg tgggggtctg ggccctacct cccacctccc 6000
263 cacagagagt ctcatatcag gatccaggga ggagctcttg ggtcctgtga agggggcgcc 6060
264 ccaacccaaa ctgggcagac aatggccggg ggtcctcaga gtctgtggg ttggagctgc 6120
265 ctctctccag cctccatggg gttggtgggt gaggccttgc ccggaggcgg tggtcagctc 6180
266 gggggacctt ggcggcccat ccagtatca acggccacac agcttgccgc gccagagtc 6240
267 ctgccccagc cctgccccac tgcctctgac ttaggatcta gttcgaaact ggttctgtgt 6300
268 ttaggtttct gctaagtca cctggaagg ctccaagtgt gtcctcctaa caaagctggt 6360
269 ctttgtcctt ctccaaggga tgtgtgggat ggggcgaaat ccccccttg ggcgccaac 6420
270 gccttttctt gattccattt tctcccccat ccttgagaa ggaggacca tccccgctg 6480
271 tcagtcgggg acagggcagg ccgtgtctgg ggcagctcag ggtccctgc tggaaagctt 6540
272 catcccgagc gctttccata gcattgagca ggagcggagg catctgcggc tgacggttgg 6600
273 ggtggcctga gcggctgggg aggagtcctg gccttgcca cagtgtgtcg tgagggtgaa 6660
274 cctgcagggc atggagaccg ccaccaagga ccccatatgc ggtgcccga ccagggatgt 6720
275 ggccaggtec gtggttgggt tegtgtctg cagccacatc tagttcctca ctgactccca 6780
276 ttccctcttc ccacagagac ccagggccct gtggagccga gctgggggaa tgcagggcac 6840
277 accatggatg gcggtatgtg gccagggttc ggggtggggg gttcctgacc aggtggagg 6900
278 ggttgaattt tgggtctggg caggcagacg cctctccaag cagccatgcg tctgacagag 6960
279 accctccctg ggtccctgcg ccaggacaat accagacc cgaggcggag cttggtgctc 7020
280 caaagaagtg gaaagtgcag agcagagaga catgcacaca gaagcacacg cgtggagcag 7080
281 cacatgcgtg cccacactta cactggcaca cacatgtgtg cacacacagg ccaaaacaca 7140
282 agggcagcag tgtttgtggg gcagacaggg ccaagggtaa aggggtctgc ttggccccag 7200
283 cccatcagtt ttgggtctcc cttcaactct ggtggctggc gaggagggtg ggccccgggg 7260
284 aggggtgtct tgcttcccc tcttggccac gttcctgggg tgaccagcct tcacccacag 7320

```

RAW SEQUENCE LISTING

DATE: 02/21/2002

PATENT APPLICATION: US/09/990,613

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

285 gtgccccgac gtcctcgccc acccgggcg tgagctttgt tccacccgtc actgtcttcc 7380
286 ccagcctgag ccgtaagcag atgctgcccc tgccagccgg gaagggggtg tttgccagtc 7440
287 ccaaagggtg gggcccagat ctagggggtgc agctgccacc aggtggggcc gttggggcag 7500
288 acccagagtc ctccgtgtgg gcggtctcct ggtcactggc caccctggg gatggggacg 7560
289 ggtcaggggt cttggagcaa aacagacgca gtccaggggt agccaggcag ggcacagcca 7620
290 gcagccgacc atgggctttt ccattccaaa aaccaggggt cctcgggcca ggggaggcta 7680
291 ccccggtggg ggctggcatg gggatggggc tcatcccgcg ctccccacag cctgaaccc 7740
292 ggcgcacaat gggcggtgtg gcagcacctg gggtgacttc cactacaaga ccttcgacgg 7800
293 cgacgtcttc cgttccctg gcctttgcaa ctacgtgttc tctgagcact gccgcgccgc 7860
294 ctacgaggac ttcaacgtcc agctacgcg aggcctagt ggctccaggc ctgtgggtac 7920
295 ccgtgttgtc atcaaggccc aggggctggg gctgaaggcg tccaacggct ccgtcctcat 7980
296 caatgggcag cggtagccg gccaccctgg ggaggggcga gggccgggcc acacagtgtg 8040
297 acctccccac acggccatgt ctgacctggg ccagggctgg ggtggggtg ggtgggcagg 8100
298 cagccaggag agcggggccc agggagagac cccgctgtct gcgcagggag gagctgcctt 8160
299 acagccgcac tggcctcctg gtggagcaga gcggggacta catcaaggtc agcatccggc 8220
300 tgggtgctgac attcctgtgg aacggagagg acagtgcctt ggtgaggaag cccctcggc 8280
301 ccttgcacct tcaggcctgg ccacaaaacc cccaccgggg gtcgagggat gcctccctgg 8340
302 gcttggggtc acggggcttg gggcatgttg ccagtggggg gatcagaggt cctgaggctg 8400
303 gagctgcccc tccccactct cagctggagc tggatcccaa atacgccaac cagacctgtg 8460
304 gcctgtgtgg ggacttcaac ggctcccg gcttcaacga gttctatgcc cacagtgaqt 8520
305 gccacctggg tgagggggcg gtgaccaatt atgtcgcca acgaagagcc acagtcccgg 8580
306 ggaggccggg agggggcgga gtggggaccg ggcaccaggc agggaggggc cacgaggact 8640
307 gtgccctaca tgggtggagg agtgccctc gggggtgttg ggccctaggc aggagtggga 8700
308 gtccctctggc ctgggctcag gaagtgggag cccatatctt gtccccagga gccctcaga 8760
309 gccaccacac cctgctttc ttcccgagc agccaggct gaccccgctc cagtgtggga 8820
310 acctgcagaa gttgatggg cccacagagc agtgcccgga cccgctgccc ttgccggccg 8880
311 gcaactgcac ggacgaggtg agtccccgc cccccccagc tccctgggag ggacggcctc 8940
312 caggctccagg gggagctggg ccgaggtctg aggaatgttc ccagctggtg gagagatggt 9000
313 gccattggag ggagccggg cagccacct ctgtgtgtc agttccacgg tacacactgt 9060
314 ccgagtgtgg tgactgcgt gttcatcagg ccacgcgtgt gccatctgt gtgagcaaac 9120
315 acaggcccat gctgcacag gttgggact ggtgggact cgggaagccc ggaagccagc 9180
316 cttccaccac gcaggtggac tcagaagggg cctggaggct ccaggatccc caaaccagca 9240
317 ggatctctga gccttaaat gtgctgtgaa tgacagcatg agccccctg tgagctgggc 9300
318 cccgcagccg gcagccctgg gcctggggac ggaggacact cagcactgga ctgccctgaa 9360
319 cctgccgggc tgcccagaga ggcggggcct ccacctccc tccctggctc cgctcctgg 9420
320 ggtgggggtc tgacctttc ttgggcgctt actccacggg caggcacatc cggagtaggg 9480
321 gatcccggt tgacgggtca ctccccagg gccaaagcaga gctctgcatg gccacagtgg 9540
322 gtggaagggg tgggctggg tacaaggaac cccgacagg agagggttc ccggcctggc 9600
323 ctgccatggg tctattcca gcacctggc agcccccatg gatggcaggg gtgccagcc 9660
324 tggccactg tgctccccag gagggcatct gccaccgcac cctgctgggg ccggcctttg 9720
325 cggagtgcc cgcactggtg gacagcactg cgtacctggc cgctgcgcc caggacctgt 9780
326 gccgtgccc cactgcccg tgtgccacct ttgtggaata ctacgccag tgcgccacg 9840
327 cggggggcca gccgcggaac tggaggtgcc ctgagctctg ccgtgagtgc tcccagggcc 9900
328 ttgccaggg attgtgccag agagaagggg cagggggagc gccttggggg cactggggg 9960
329 tggggaggcc tgggggacag ggggtggagg cagaggacct accccagcca tagtgggcag 10020
330 aggccacccc aggacccccg aggggggtgg ggccgcggg ggtgcaggg gaaggagagg 10080
331 cttgtggaga ggcttgtgca gcaggtggca ggggctgggg ctggagggtg tagctgcca 10140
332 cgatgagggg cgtcagggcc accctggggc ctgactctgg cttctgtgga cttgatggca 10200
333 tgtggaaggc cgtggaaggc ggctggggct gaccacacgg gcagtacagg gcccttcccc 10260

```

RAW SEQUENCE LISTING

DATE: 02/21/2002

PATENT APPLICATION: US/09/990,613

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

334 tggcccagcc ccgectcett ttgcgcagcc cggacctgcc cectcaacat gcagcaccag 10320
335 gagtgtggct caccctgcac ggacacctgc tccaaccccc agcgcgcgca gctctgcgag 10380
336 gaccactgtg tggacggctg cttctgcccc ccaggcagtg cttgtgtgcc ctgaacccct 10440
337 cagggggcctt tcaggtccct gctcccaacc ccgccccag cctcatcagg cctggaagca 10500
338 gagccccca tgcagaagg tcccaccaga gggcccaggg tgggaagggc actggctggg 10560
339 aggggtgctg aagacctgcc gatgcgtgga gggaggtaga gcagtgccat gagccagctg 10620
340 ggcatgggtg ggaactgag gccagaggt gcttgggtgt catccaagcg agtgcagctc 10680
341 agggcggggg cagtgtcctg gagcaggaat tctcccca gggaggcagc ttgtcccaaa 10740
342 ggccgggtgt tctgacctt ggtgtccccc gtgcattggc cggccctgcc tcacgcgcgc 10800
343 cccacagggc acggtgctg atgacatcac gactctggc tgctgcccc tcgggcagtg 10860
344 cccctgcacc cacggcggcc gcacctacag ccggggcacc tccttcaaca ccacctgcag 10920
345 ctcttggtac ttatgagccc accagcctcc gcctgggggt ggggtgtggg ctcttggtat 10980
346 ttatgaaccc gccagcctct gcctgggggt ggggtgtgga gctcctggtg tgcaccacc 11040
347 agcctccgcc tgcggtgggg gtgtggaggg tggggccacc ctctcccgca catgcgggtt 11100
348 ctgctcagcg cctccctccc cagcactgc tccggggggc tatggcagtg ccaggacctg 11160
349 cegtgccttg gcactgctc tgtgcagggc gggggccaca tctccacctg tgatgagaaa 11220
350 ctctacgacc tgcattgta ctgcagctac gttctgtcca aggtctggc ttggggccgc 11280
351 gtcttcagac accagaccc tcttgggacc ctcatgccac ttccaccag gggaggcccc 11340
352 cagcatggtc atagagggt gcatgtccct gctgaggggg gagccctggg tccccatgat 11400
353 ggtcatagag gcatggctct cctgctgag cggcatgggg ccaaggagcc ccaggccct 11460
354 gagacaagct gctgggaggt gaccagaggt gccaggacc acctccccc agagccacat 11520
355 ccccccacat ggcaccccca gcacacttct ggggggcacc ccacatcatc gagccaggcc 11580
356 caatgcacgc gtgggtcctt ctcccagaa atgtgccgac agcagcttca cegtgtctgc 11640
357 tgagctgcgg aagtgcggcc tgacggacaa cgagaactgc ctgaaagcgg tgacgctcag 11700
358 cctggacggc ggggacacgg tgaggacctg gctggggccc tgggctggga caggaagagg 11760
359 catgcgaagg tgtgtgggga gcaagcacgg tcaggteccc ctccagcccc gaggccaggt 11820
360 ccccccctca gccccaggc caggtecccc tccagcccc aggtcaggtc cccctccag 11880
361 cctgaggtc aggtcctccc gggggggcaa ttgcagagcc caccgcaggt ccaggcctga 11940
362 gcttctctgt gggctctgtc ccagtgggg gccctgggc aggccacccc ctcatctgag 12000
363 agtcgggaat gggctctctc ccagagctga cctccgcgcc gctccttcc gcaggccatc 12060
364 cgggtccaat cggacggcgg cgtgttctc aactccatct acacgcagct gccctgtctg 12120
365 gcaggtatgt ggtctccca ggaoggcgg cgtgggtggc gcctgcttgc aggggcagct 12180
366 cccacagcct gggcagcgtc cgtccatcc ctgtagtctc tccgtggcct cgggcagctc 12240
367 caggagctcc ctgtgctcgg tttctcgtct gcagagtggg gatgccaggc tcccaccccg 12300
368 gcagcggcag ggaccccaca tccagctcgc tcagccccc tctctcaggg agcccggtct 12360
369 ccacctgagc ccacttgcg gccacaggca tgggacaggg agcctgaggg ctctggcca 12420
370 ctctgggtc tccctccgg gtctcagtg ggtggcccg ccaactggat gccctgcccc 12480
371 tccaatctag ccagatctgt cctgcaccc ctgaccggcc tctcccccac actcccgcca 12540
372 gccaacatca cctgttcac acctcgagc ttcttcatcg tgggtgcagac aggcctcggg 12600
373 ctgcagctgc tgggtcagct ggtgccactc atgcaggtgt ttgtcaggct ggaccccgcc 12660
374 caccagggcc agatgtgcgg tgaggtcggg caggggcctt cggggacagg gccattgggg 12720
375 acggggcctg gactagcgc aggtgcagg gaggggcagg cagaggcggg caggggaccg 12780
376 gggagggggc tgccccagg gcattggcga gatcctggtg ccagcgcagg acaccagcat 12840
377 tggaccagc gccccggaag cagccagctg ggaggatgga gcgggcagcc ctgccctggc 12900
378 tcaggccgac tttgcacag ggtggcttt gcacaggggc cgaactgaca gggggccccc 12960
379 ccgccaggc ttatctgcag agggttctgg gacgagaatc ctgggacagg gctcccagcc 13020
380 gttctacct gtgtgtgtgc tggagggatg gcaggggcca ggagccaggt gggcccaaca 13080
381 gtggccgctg acatccccc acctggccc ccaggcctgt gtgggaactt caaccagaac 13140
382 caggctgacg acttcacggc cctcagcggg gtgggtggag ccacgggcgc agccttcgcc 13200

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/990,613

DATE: 02/21/2002

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

383 aacacctgga aggccccaggc tgcctgtgcc aatgccagga acagctttga ggacccttgc 13260
384 tccctcagtg tggagaatgg tactcctcgc ccccccaccc acagtcaccc caggctcaag 13320
385 tcccacccag caccttcctg tcccctgggc caccggggacc cctgggtggg attggggacc 13380
386 ccattggaggc aggtgggagg catcaggagg aggtgcttgg ggccaggcgg ccagaacccc 13440
387 ccaaggcgca gcaggtgagc cgcaaattec aactcaactg tccccgggct gagggggtcg 13500
388 caggcctgcg tgtcaggggg gtgggcttcg gggcaggggc tggagatgag gtcaggctct 13560
389 cccacagag aactacgccc ggcactgggt ctgcgcctg accgatccca acagtgcctt 13620
390 ctgcgcctgc cactccatca tcaaccccaa gcccttcac tcgggtgagag gctgaggcca 13680
391 gacccccacg cctgggcagg atgggtgggg gagccttggc aggtctgggt cctgacgcc 13740
392 ccgacgcctc ccacctccgc agaactgcat gtttgacacc tgcaactgtg agcggagcga 13800
393 ggaactgcctg tgcgcgcgc tgtcctccta cgtgcacgcc tgtgcgcca agggcgtaca 13860
394 gctcagcgac tggaggagcg gcgtctgcag tgagtccca cgctgggggt gggatgtgtc 13920
395 cacaccgcgt ggggtgcgcg gggaccctgg ccggcagcag ccgtcactca cacggttctc 13980
396 agcccagagc ttgcaacttc ctcatcccag cctcgcaaga acctcatgcc cttgcgatcc 14040
397 ccacgtcaca gacggggatg ctgagttgaa gatgggggct ggccaggctg ctcgccgct 14100
398 gacctgtccc cctggcccc accgaccaca gccaaagtaca tgcagaactg ccccaagtc 14160
399 cagcgctacg cctacgtggt ggatgcctgc cagccactt gccgcggcct gagttaggcc 14220
400 gacgtcacct gcagcgttct ctctgtgctt gtggacggct gcacctgcc cgcgggcacc 14280
401 ttctcaatg acgcgggcgc ctgtgtgccc gccaggagt gccctgcta cgtcacggc 14340
402 accgtgctgg cctctggaga ggtgggtgac gacgaggggc ccgtgtggtg agggctctgg 14400
403 gggaaagcag gccccccagg tgcctctcag agccacttcc cgccctcccc gaaggcttct 14460
404 gtgcctcccc ccgagggttc tgagacacga ggggccaggc tggggagagt ggggcagggt 14520
405 ggacccagca cattctgaag agaaaattcc cagctgggaa agaggccagg agaggaggtg 14580
406 gccctgggag gacacctgct ggctgttctc agctgggtcc acatggcagc cctgccagg 14640
407 aaaggtgggt ggcctccact cccacctggt gctcaaaggc cgctcctaac ccagggtcc 14700
408 tggtgctttt gctgcccccc tgtgtgtatt taccatgtg cctccagggg atttgggggc 14760
409 tcccagcaaa cacagcagca ggcaccgtct ggccttaca ggaggtggcc aggtctggga 14820
410 ggcccagcat tcggcggggg ctcggaagcc cgggggtggg gtctgcgggg tgaggccgc 14880
411 agatccaggc tgtgcctct gtctcttgta gttcatgtac ggggtgggag ctaagctgcc 14940
412 tgggagctc tctgcagaaa agcacaggta agtgccacc ctgcctgcc ctgccccgc 15000
413 ccgcatcacc ccgcctggcc tggccccaac acgccccacc ctgccccacc ccacctgaac 15060
414 cctgcccggc caggtcagtc ctcaactggg ctctgccaca ggcacccatg ccctgacacg 15120
415 ccagggaagg agggggccagt gggctctctg ccgcagtggt ggccgggggt tcctgggggt 15180
416 gggggctgca ggtgtcatgg aagctttggc tcgggggctg ttaactgat cagcaggaca 15240
417 ggctcagggc tgcctggggc cagttgaggg ccgtggctgc ccttccccag gacccctccc 15300
418 accaagctct gtccccaggg tgtgcagccc ccatgggtga cctggactgc agcaacagct 15360
419 cggcgggcac cctgggggcc gagtgcctcc ggagctgcca cagctggac gtgggctgtg 15420
420 tgagttccat gcttcaggga ggggtgggca ggaaggggt cccagcttcc ccagctccc 15480
421 agcccaggga tctggtggtc ctggagacac ttaccacct ggaagctcc cctggccca 15540
422 tgcgttgccc tgggtgctgc tgggtgcgcc tgtcccagag ggtgagtgac atctgcccac 15600
423 cctggtgtcc agccctgacc ggtacctgcc tgggccccac agttcagcac aactgcgtg 15660
424 tccggtctgt tctgtccccc ggggtggtg tcggatggga gtgggggctg cattgccgag 15720
425 gaggactgcc cctgtgtgca caacgaggcc acctacaagc ctggagagac catcagggtc 15780
426 gactgaaca cctggtgggt cgtgagtcct tcggaggcag caggtgggga gggcgggggc 15840
427 ggggagggca gcgggtgggg aggcagcggg cagggagggc agggggcggg gagggcagg 15900
428 ggcagctgag ccagggtgag gtggggccgt gccaggagag agagttgcta ggaaagccat 15960
429 gggcgtcct gtgcctctc tggaaagtgg cccaggggcc atgggtgtac caggagcctg 16020
430 gtggggctgc gtgccctgca ttcaagtggt gggacaccac ttcttccacg gaggggggt 16080
431 caggctgggc ctggggaggc tgaggccccg tgctgacctg cacaggcctg ggtgccgggt 16140

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/990,613

DATE: 02/21/2002

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

432 ctcaggaagg ccgggagagc agggccctgt gagcaggcac cattgtggcc ccttgacgca 16200
433 cctgcaggaa ccggagggtg gagtgcagcc accggctctg cctgggcacc tgcgtggcct 16260
434 acggggatgg ccacttcac cctttgatg gcgategcta cagctttgaa ggcagctgcg 16320
435 agtacatctt ggcccaggta cgcgcgcgcc tgcgccactc ctgcaggccg ggcacactcc 16380
436 agcccgcggc cagcagcttg tctctttctg gcccaggact actgtgggga caacaccacc 16440
437 cacgggacct tccgcacgt caccgagaac atccctgtg ggaccaccg caccacctgc 16500
438 tccaaggcca tcaagctctt cgtggagggt agaacggccc cagctgtgag ccccccgac 16560
439 cctgcagcca acgagccggc ccccgaggaa gcttcgtgag gctttagctg caccacagg 16620
440 ttctcagcag tgcctggcc ccgggtgct gttccaagca gccacaaacc agggggctta 16680
441 gacaacagaa atgcattctc agtctggag ccggaagtca gagatccagg cgggcagggc 16740
442 cacactccct gtcgagggtc tggggagggt cttcctgct ctcccagctt cacaggcggc 16800
443 aggcgtccct gggctgtggc tgcctgtggc ctcccgctgt gtctgctct gtcttctctc 16860
444 tgtttttctc ttctgtctct tgtaaggaca ctggtcattg gatttagggc cccccccgc 16920
445 cccacgtag tccaggatga tctcatttca agatgcttca cttaatccg tctgcagaga 16980
446 tgccttctcc cagtgagggc ccgggtgag gttctgggag ttgcagtg gacaggcatt 17040
447 ttcaggagcc acgattcacc ctgccacacc tagagacacc cactccagca aaggggggc 17100
448 agagctccca ggggataaag cagcgcgct ggcgggatg ctccctgcag atggcgggag 17160
449 gggctgagga ccgcagcgg tcaggggagg ctggtgtgag ggcgtgggg ctgcagggt 17220
450 ggatggggag cagggtggg tggagtggg ctactgcagc ctctgctgt cccgtgcagc 17280
451 cccaaggttc ccaggcagcc cctgttccca gcacttctg gccagcctt tgccaaacct 17340
452 tcaactgagg tctcagggac ccagctcacc cctaaccgca gccgttgtg ctaagagccc 17400
453 gtgcgcacct gcagagcact ggggtgggca tccctgggtc tcaggcccct cctgggggc 17460
454 cacagggtcg gcttcggca gcgtctgct cccctgcaga gctacgagct gatcctccaa 17520
455 gaggggacct ttaaggcgtt ggcgagagg ccgggtggg acccacccta caagatacgc 17580
456 tacatgggga tcttctggt catcgagacc cacgggatgg ccgtgtctg ggaccggaag 17640
457 accagcgtgt tcatccgact gcaccaggac tacaagggtg gctcgggccc tgcactccta 17700
458 ggccctgcag gaccctctca cagtacaga aaccctggt ccagggtggg cctgtgggac 17760
459 tcgctgaccc gtgggtgcgt gagcctggct ggtgagggcc ctgctgtgg cctccacagt 17820
460 gggcagagga ttttgaggg aagcaggtgc caccagcgg cccaccaggg gacccactgc 17880
461 acacctgtct cctacaagtt caccaggcac tgcctgggga accggctgcc ctccctccat 17940
462 ccccgagggt ctctggagcc cagggtggg ctctgtgtgc ctcccacggg tgctgtggc 18000
463 cccagctcca gggcccact ctctcgtgc ctctgcagg cagggtctgc ggctgtgcg 18060
464 ggaacttcca cgacaatgcc atcaatgact ttgccacgct tagccgtcc gtggtgggg 18120
465 acgcactgga gtttggaac agctggaagc tctccctc ctgccggac gccctggcac 18180
466 ccaaggaccc ctgcacggcc aacccttcc gcaagtctg ggcccagaag cagtgcagca 18240
467 tctccacgg cccaccttc gccgctgcc gctcccagg ggggtctgg tcttggcagg 18300
468 cagggtctgg tgggatggc agttgcttc ttcccgcga gaactgggtc ttctgggcag 18360
469 acagcagcgc tccaaggagg gtctgacct gtcccacggc acacagtcct ggatgtcagg 18420
470 tcccaagtec ggatctccc tcagccccc accgtgacct cttgcccctg gcacgaagcc 18480
471 atcttggtcg tttccggcc actccttga ccacagctc agtcacaccc agaggctcac 18540
472 agggaggggc agccctctat gtggcccta gccacctcc tctatgatcc ccagacctgc 18600
473 ccagtcctca gcacaaactg gaatgccagc ctggctccc gctcagccag ggaggaatca 18660
474 gagatctgcc ctaagcagag acttccgaaa agcagtttcc tgactgggcg cgggtggtca 18720
475 tgtctgtaat cccagcactt tgggagctg aggcagggtg atcacctgag gtcaggagtt 18780
476 tgagaccagc ctggtcaaca tggcgaaacc ccgtctctac aaaaaataca aaaatagccg 18840
477 ggtgtggtg tgtgtgctg taatccagc tactcgggag gctgaggcag gagaatcact 18900
478 tgaacctggg aagaggaggt tgcagtgag caagatcgt ccactgcact ccagcctaag 18960
479 caaaaagagt gagactctgt ctcaaaaaca aacaacaaaa aaccaaaaag cagtctcgtg 19020
480 tcatcttaag gaagacttga gtgcccactt aggcacacag catggtggct caggagctga 19080

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/990,613

DATE: 02/21/2002

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

481 gatgagggggc tggcgtaggg gcagcagtg gcatactcgc tcgtgggagg cctgaagca 19140
482 ctctcatgtc ggcgcgcgt tgcctcttg agaaggcagc tggtgacccc ttggaaggtc 19200
483 ctgtggcctg acaaagctga gccaggttc agatggggcc tgggaggggt gtgggctgcc 19260
484 tggaggaagc aggcagcttc ccatggtcag gacgcattca cagctcagct cccgcgtgg 19320
485 ctggtctgga aaggaaagtga ccactccttc cttagtgcac attcactggg tgccctggaat 19380
486 agcctggcat gttctgggct caccocagtg atcaggggac gaggctgacc ctcacagagc 19440
487 ttccagagga ggcagaaagg cggtggggtgc tgggtgggtcg gatgctagga tgtggagggc 19500
488 cctggccggg ggttggttcc gctggaggga agggcccccag gtggaaagga ggccagtacg 19560
489 actgcagcgg agggaggtgg gggcgagggc agagggtaag caggggtgct atgctccaca 19620
490 tgggtttgaa acctgtgggc cacatgacca gatccacgtg atagaaagat ccaaagagca 19680
491 catgtgaagg caggcagatg ggcaggtgca taggtgggca ggtgcatagg tgggcagatg 19740
492 gacaggtggg cagatgggca ggtgggcagg gatatagggtg gacgagggca caggtgggct 19800
493 ggagaagtgc tggggcagct cccatttggg gcacgctctg aggtattcca ggccccagga 19860
494 gctcagagag ctgccatggg ggggtgtgaa atacagatgg ttccagcaac tggccctggg 19920
495 ccagccaccc cctggccggg ggggccattg tcccggtga gctgcacctt ggccctaccc 19980
496 gcaggttgac tccaccaagt actacgagge ctgctgaac gacgcgtgtg cctgcgactc 20040
497 ggggtggcag tgcgagtgtt tctgcacggc tgtggctgcc tacgccagg cctgccacga 20100
498 cgcgggcctg tgtgtgtcct ggcggactcc ggacacctgc cgtgagtcgg gctctgtccg 20160
499 tgggtgctgaa ggggtggagct gctggggcag gggaggaggt gtggcagcct ccgaagggtgc 20220
500 attgacctgg gectgagccg cacacagaca tccaaacgc atgtgectcc atgtgagtcg 20280
501 acaagtttct atgcacagag gaagacctgt gcaaaaccac cagacaggtt gccccagcat 20340
502 gagacagctc ctaggggaca agagtccaa gggcagggct ggggagtggg ggggaagggtg 20400
503 aggcaccacc cggccgagge cctgcatgtc tgggacaagc ccgggtctgg ctctggggac 20460
504 accggccccc acgcccgggg taggggctgc cctgcacaa aggggtgagg gctggtggcg 20520
505 cctccttagc ctctgcctc tgtgcccag ccttgttctg tgacttctac aaccacatg 20580
506 ggggctgtga gtggcactac cagecctgcg gggcaccctg cctaaaaacc tgccggaacc 20640
507 ccagtgggca ctgcctgggtg gacctgcctg gcctggaagg tgaggggag cctttcttgg 20700
508 atggagctc ctctccttgg gttcccaggt gtacgtgggg gggcggggat cccagggac 20760
509 gcggtgtagg ctcccgtaa ctgcacaatg caagccttga gggcaggccc ctgctggctg 20820
510 gtggggggcg gctactccct gcagctgga gccctggct ggagagacta aaggccctg 20880
511 gtgagcttc tctcaccct gcggcccta ggtgctacc cgaagtgcc acccagccag 20940
512 ccttcttcca atgaggacca gatgaagtgc gtggcccagt gtggctgcta cgacaaggac 21000
513 ggaaactact atgacgtcgg tgaagggtc cccacagcgg agaactgcca gagctggtga 21060
514 gggggtggga agcgggtggc gctgggggag cagggctggg gagcaggccc tgcaggctgc 21120
515 cccccagggc ctcagctcgc ctctccccc cccctagtaa ctgcacacc agtggcatcc 21180
516 agtgcgtca cagccttgag ggtaaggga ggcgggggg ttagtgggccc ggtgaaggct 21240
517 ggggccaggg gctcggaggc cctgggtgac tctgccggct ccaccccag cctgcacctg 21300
518 cacctatgag gacaggacct acagctacca ggacgtcatc tacaacacca ccgatgggct 21360
519 tggcgccctg ttgatcgcca tctgcggaag caacggcacc atcatcagga aggctgtggc 21420
520 atgtcctgga actccagcca caacgccatt caccctcacc accgcctggg tccccactc 21480
521 cagacaagt aagccctgcc tggctctcct gaggcccagt actgtctggg tgacaaggag 21540
522 gacccctgg gctcttagtg caggtgccct gtatggtagc gacagtccca atccactgac 21600
523 cttccgggct ctgtctaggg gtgcacggcc cctcaacacc ctgctgtct ccaggggctc 21660
524 cccacgaag ctcagcaaa tgattgtgg gatacccaaa ggagacaata aagcttccct 21720
525 ggactccgct ccatccctca gcacggccta tcccagccag ccagctccct caaggccagg 21780
526 ctgccaggcc ccagtcctc atgcagaaac ggctctaacc aaggctgagg caggcactgg 21840
527 ggtcccccag atccacagg ggcagggcca gccctgggga aagggtcctc tggggccct 21900
528 ccaccttggt aggcaggac tggaggatgc tgagccagga ccccttccc atgcccctg 21960
529 caggcccggc cctcccggtc tccaccgtgt gtgtccgcga ggtctgccgc tggctcagct 22020

```


RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/990,613

DATE: 02/21/2002

TIME: 12:00:54

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

```

530 ggtacaatgg gcaccgceca gagcccgccc tgggaggcgg agactttgag acgtttgaaa 22080
531 acctgaggca gagagggtac caggatatgcc ctgtgctggc tgacatcgag tgccggggcgg 22140
532 cgcagcttcc cgacatgccg ctggaggagc tggggccagca ggtggactgt gaccgcatgc 22200
533 gggggctgat gtgcgccaac agccaacaga gtcccccgt ctgtcacgac tacgagctgc 22260
534 gggttctctg ctgogaatac gtgccctgtg gcccctcccc ggccccaggc accagccctc 22320
535 agccctccct cagtgcacgc acggagcctg ctgtgcctac cccaaccag accacagcaa 22380
536 ccgaaaagac caccctatgg gtgacccgca gcacccggtc gacggcgggc ctcacctgc 22440
537 agactgggtc cagctcaggc cccgtgacgg tcaccccctc ggccccaggt accaccacct 22500
538 gccagccccg gtgtcagtg acagagtgg ttgatgagga ctaccccaag tctgaacaac 22560
539 ttggagggga cgttgagtcc tacgataaga tcagggccgc tggagggcac ttatgccagc 22620
540 agcctaagga catagagtgc caggccgaga gcttcccca ctggaccctg gcacaggtgg 22680
541 ggcagaaggt gcactgtgac gtccacttcg gcctggtgtg cagggaactg gagcaggagg 22740
E--> 542 gcgtcttcaa gatgtgctac aactacagga tcc 22773<210> 7
543 <211> LENGTH: 19
544 <212> TYPE: DNA
545 <213> ORGANISM: Homo sapiens
W--> 547 <210> SEQ ID NO:
E--> 547 <400> SEQUENCE: 7
548 gcggcaccac gagcatggc 19
E--> 550 <210> SEQ ID NO: 8

```

*print
and
return*

VERIFICATION SUMMARY

DATE: 02/21/2002

PATENT APPLICATION: US/09/990,613

TIME: 12:00:56

Input Set : A:\UC072.001A-SEQ-ID.txt

Output Set: N:\CRF3\02212002\I990613.raw

L:542 M:254 E: No. of Bases conflict, LENGTH:Input:7 Counted:22775 SEQ:6
L:542 M:320 E: (1) Wrong Nucleic Acid Designator, NUMBER OF INVALID KEYS:10
L:542 M:252 E: No. of Seq. differs, <211>LENGTH:Input:22773 Found:22775 SEQ:6
L:547 M:282 W: Numeric Field Identifier Missing, <210> is required.
L:547 M:212 E: (34) Invalid or duplicate Sequence ID Number, SEQUENCE ID NOS:6 differs:7
L:550 M:214 E: (33) Seq.# missing, SEQ ID NO:7